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09/641,666	08/18/2000	Nancy Anne Winnard	199-0571	6731

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EXAMINER
VAN DOREN, BETH

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 07/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/641,666	WINNARD ET AL.
	Examiner	Art Unit	
	Beth Van Doren	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>17 June 2004</u>.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-13,31-33 and 35-45</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1,2,5, 7-13,31-33 and 35-43</u> is/are rejected.
7) ☒ Claim(s) <u>4,6,44 and 45</u> is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
       1. ☐ Certified copies of the priority documents have been received.
       2. ☐ Certified copies of the priority documents have been received in Application No. _____.
       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   The following is a final office action in response to communications received

06/17/04. Claims 3 and 34 have been canceled. Claims 1, 5, and 31 have been amended.

Claims 1, 2, 4-13, 31-33, and 35-45 are now pending in this office action.

Response to Amendment

2.   Applicant's amendments to claims 1 and 5 are sufficient to overcome the claim

objections set forth in the previous office action.

3.   Applicant's cancellation of claims 3 and 34 and addition of limitations to claims 1

and 31 are not sufficient to overcome the objections as to being allowable subject matter

dependent upon a rejected base claim because the applicant has not properly rewritten the

allowable subject matter of claims 3 and 34 in independent form <u>including all</u> of the

<u>limitations</u> of the base claim <u>and</u> any <u>intervening claims</u>.

Response to Arguments

4.   Applicant's statements with regards to the rejections set forth in the previous

office action have been considered, but they are not persuasive. Applicant has stated that

the examiner has correctly acknowledged that the prior art of record fails to teach or

suggest limitations recited in claims 3, 4, 6, 34, 44, and 45.

       Examiner points out that each of claims 3, 4, 6, 34, 44, and 45 were objected to in

the previous office action as being dependent upon a rejected base claim, but would be

allowable if rewritten in independent form including <u>all of the limitations</u> of the base

claim <u>and any intervening claims</u>. Examiner points out that the cancellation of the

limitations of claims 3 and 34 and the addition of new limitations to independent claims 1

and 31, these added limitations not including all of the limitations of claims 3 and 34, does not satisfy this requirement.

Specifically, with respect to claim 3, examiner objected in the previous action to claim 3 as containing allowable subject matter that would be allowable if rewritten in independent form with all of the limitations of the claim and any intervening claim. First, claim 3 recited "computing a first cost variance associated with warranty of the product manufactured with the engineering design change and underwent product verification testing; computing a second cost variance associated with warranty of the product manufactured with the engineering design change and without undergoing product verification testing; selecting an optimum from the first and second cost variances", and all of these limitations are not present in amended independent claim 1. Also, claim 3 was dependent on claim 2, and claim 2 was dependent on claim 1. The limitations of claim 2 have not been amended into the independent claim 1. Therefore, Applicant has not properly responded to Examiner's objection to allowable subject matter.

With respect to claim 34, again Applicant has neither amended all the limitations of claim 34 into independent claim 31 nor includes the limitations of intervening claim 33. Therefore, in this instance as well, the Applicant has not properly responded to Examiner's objection to allowable subject matter.

Claim Rejections - 35 USC § 102

5.　　　The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6.   Claims 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by

Tegethoff (U.S. 5,539,652) .

7.   As per claim 31, Tegethoff teaches a computer-implemented engineering change

decision analysis system for analyzing an engineering design change in a product,

comprising:

a graphical user interface operating on a computer to receive a selection of (i) a

change driver that is driving the engineering design change, (ii) general cost information

associated with the engineering design change, including product warranty variance

estimates associated with the product manufactured without product verification testing,

and (iii) change driver-specific information associated with the selected change driver

(See at least the abstract, figures 4 and 12, column 6, lines 5-13 and 30-67, column 7,

lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-67, column 12, lines 5-

35, and column 15, lines 1-5, 15-30, and 60-67, wherein change-driver selection, general

cost information, and updated information concerning the change driver are obtained via

a user interface. The cost difference is computed associated with the warranty of the

product. See at least column 5, lines 55-67, column 16, lines 45-65, and column 22, lines

25-30);

an analysis logic program operating the computer to compute a cost associated

with the engineering design change using the general cost information, a value associated

with not implementing the engineering design change using the change driver-specific

information, and compare the computed cost and value and generate a recommendation

of whether the engineering design change should be implemented in response to the

comparison (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6,

lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-35, column 15, lines 1-5,

15-30, and 60-67, column 16, lines 45-65, and column 22, lines 25-30, wherein a cost is

computed through the simulation and a value is computed in the "what-if" scenario

associated with not implementing the design change. The results of the simulation are a

recommendation of whether or not to implement the design change).

8.   As per claim 32, Tegethoff teaches a system further comprising receiving an

identification of specific data in the general cost information or the change driver-specific

information to vary, and the analysis logic program operating the computer to vary the

specific data, and compare the computer cost score and value and generating an output in

response to varying the specific data (See at least the abstract, figures 4 and 12, column 5,

lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-

35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column 22, lines

25-30, wherein a cost is computed through the simulation and a value is computed in the

"what-if" scenario associated with not implementing the design change. The results of

the simulation are a recommendation of whether or not to implement the design change).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1, 2, 5, 7-13, 32-33, and 35-43 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Tegethoff (U.S. 5,539,652) in view of DPL 4.0

(www.adainc.com).

11.   As per claim 1, Tegethoff teaches a method of operating a computer to perform an engineering change decision analysis of an engineering design change in a product, comprising:

displaying a list of change drivers that are driving the engineering design change and receiving a selection of a change driver from a user (See at least the abstract, figure 4, column 6, lines 5-13 and 30-67, column 7, lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-67, column 12, lines 5-35, and column 15, lines 1-5, 15-30, and 60-67, wherein a user selects from a list a change driver that influences the engineering design change);

soliciting general cost information associated with the engineering design change (See at least the abstract, figure 4, column 6, lines 5-13 and 30-67, column 7, lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-67, column 12, lines 5-35, and column 15, lines 1-5, 15-30, and 60-67, wherein general cost information is stored in the system, as supplied by an expert, designer, engineer, etc.);

displaying a set of questions soliciting change driver-specific information associated with the selected change driver (See at least the abstract, figure 4, column 6, lines 5-13 and 30-67, column 7, lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-67, column 12, lines 5-35, and column 15, lines 1-5, 15-30, and 60-67, wherein a set of inquires are displayed for updated information concerning the change driver);

receiving answers to the set of general cost questions from the stored user information (See at least the figure 4, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 8, lines 50-55, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column 22, lines 25-30, wherein

answers to cost issues are received from information stored in the databases of the system);

receiving answers to the set of change driver-specific questions from the user (See at least the figure 4, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 8, lines 50-55, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, and column 16, lines 45-65, wherein answers are received about change-driver specific information) ;

computing a cost associated with the engineering design change using the general cost answers (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column 22, lines 25-30, wherein a cost is computed through the simulation);

computing a cost variance associated with warranty of the product manufactured with the engineering design change wherein the product (i) has underwent product verification testing and (ii) has not underwent product verification testing (See at least the abstract, figures 4, 8, and 12, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 11, lines 60-67, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, column 17, lines 1-20 and 40-67, column 18, lines 1-10, and column 22, lines 25-50, wherein a cost difference is computed associated with the warranty of product);

computing a value associated with not implementing the engineering design change using the change driver-specific answers (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column

12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, and column 16, lines 45-65,

wherein a value is computed in the "what-if" scenario associated with not implementing

the design change); and

comparing the computed cost and value and generating a recommendation of

whether the engineering design change should be implemented in response to the

comparison (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6,

lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-35, column 15, lines 1-5,

15-30, and 60-67, and column 16, lines 45-65, wherein the simulation recommends

whether or not to implement the design change).

However, Tegethoff does not expressly disclose displaying a set of questions

soliciting general cost information and receiving answers to these questions from the

user.

DPL 4.0 discloses displaying a set of questions soliciting general cost information

and receiving answers to these questions from the user (See pages 3, 11-14, 17, 24, and

36-37, which discuss displaying inquiries requires cost information input and receiving

said inputs from the user).

Tegethoff discloses a simulation tool integrated with computer aided design tools

to allow for continuous engineering of a product from design through manufacturing and

sale. Tegethoff discloses that users input information into the tool. First, experts and

engineers enter information into databases of the system that includes cost information

related to the components of the engineered products, this cost information being used

when a user selects a component or assembly for simulation to occur. Second, at the time

of the needed simulation, users select change drivers and input change driver-specific

information. The simulation of Tegethoff results in the communication of results that guide the user in choosing to implement the engineering design change or not. DPL 4.0 also discloses a tool that receives data about a manufacturing situation, runs simulations on the data, and communicates results that guide the user in choosing to implement the engineering design change or not. It would have been obvious to one of ordinary skill in the art at the time of the invention to display cost questions soliciting general cost information and receiving answers to these questions from the user in order to increase the accuracy of making recommendations for a user by considering values provided by the user at the time the simulation is performed. DPL 4.0 discusses using decision methodologies to generate complete, comprehensive, and focused analyses for business purposes in order to take into account all the alternatives on at least page 22.

12.   As per claim 2, Tegethoff discloses a method wherein computing the cost associated with the engineering design change comprises:

computing a cost variance associated with warranty of the product manufactured with the engineering design change (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column 22, lines 25-30, wherein a cost difference is computed associated with the warranty of product);

computing a cost variance associated with producing the product manufactured with the engineering design change (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column 22, lines 25-30, wherein a cost difference is determined for producing the product); and

summing the warranty cost variance with the production cost (See at least the abstract, figures 4 and 12, column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 12, lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column 22, lines 25-30, wherein a total cost is computed through the simulation).

13.   As per claims 5, 7, 8, 9, and 12, Tegethoff teaches soliciting general cost information associated with the engineering design change and:

As per claim 5, computing warranty variance estimates for product warranty of the product manufactured with the engineering design change and respective probabilities;

As per claim 7, computing cost variance estimates for manufacturing the product with the engineering design change and respective probabilities;

As per claim 8, computing tooling cost variance estimates for product warranty of the product manufactured with the engineering design change and respective probabilities;

As per claim 9, computing incremental piece cost variance estimates for product warranty of the product manufactured with the engineering design change and respective probabilities;

As per claim 12, computing warranty variance estimates for product warranty of the product manufactured without the engineering design change and respective probabilities;

(See at least the abstract, figures 4, 8, 9, and 12, column 6, lines 5-13 and 30-67, column 7, lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-67, column

12, lines 5-35, and column 15, lines 1-5, 15-30, and 60-67, wherein general cost

information is stored in the system, as supplied by an expert, designer, engineer, etc.

This cost information is used to compute a cost difference associated with the warranty of

product, compute a cost difference associated with the manufacturing/tooling the product,

a cost difference associated with the components and the combinations thereof, and the

likelihood of all these occurrences. See column 7, lines 1-25, wherein the what-if

analysis considers the cost differences by incremental components).

However, Tegethoff does not expressly disclose displaying a set of general cost

questions requesting highest, best, and lowest cost variance estimates and receiving

answers to these questions.

DPL 4.0 teaches displaying questions and receiving a highest/best and a lowest

cost variance estimate for producing/manufacturing the product with the engineering

design change, the variance of incremental pieces, and also teaches branch nodes and

probabilities (See at least pages 1, 4, 12, and 36-37, which discusses a best and lowest

cost change assumption for producing the product, each with a .5 probability of

occurrence. More than 2 branches can be used in more complex situations).

Both Tegethoff and DPL 4.0 discuss the analysis of decisions of a user with

respect to an engineered product using a computer-implemented methodology that takes

in account the input of a user to compare options, as well as considering the weight of the

factor. Examiner points out that the terms tooling, warranty, incremental pieces, etc. are

non-functional descriptive data that do not have any structural or functional affect on the

claimed method. Therefore, it would have been obvious to one of ordinary skill in the art

at the time of the invention to include displaying questions and receiving input for each

of the best, lowest, and highest estimates of warranty cost variance in order to increase

the efficiency of the methodology in making accurate recommendations for a user by

considering a more complex web of values when making the decision. DPL 4.0 discusses

using decision methodologies to generate complete, comprehensive, and focused analyses

for business purposes in order to take into account all the alternatives on at least page 22.

14.   As per claim 10, Tegethoff teaches a method wherein displaying a list of change

drivers comprises displaying a list including management directed, customer satisfaction,

quality, cost, feasibility, and missed objective change drivers (See at least the abstract,

figure 4, column 6, lines 5-13 and 30-67, column 7, lines 10-25, column 8, lines 50-55,

column 11, lines 30-50 and 55-67, column 12, lines 5-35, and column 15, lines 1-5, 15-

30, and 60-67, wherein the tool includes many different pieces that drive the change of

the product).

15.   As per claim 11, Tegethoff teaches a method wherein displaying a set of questions

soliciting change driver-specific information comprises displaying a question regarding a

late engineering design change (See at least the abstract, figure 4, column 6, lines 5-13

and 30-67, column 7, lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-

67, column 12, lines 5-35, and column 15, lines 1-5, 15-30, and 60-67, wherein required

inputs of the user include inputs concerning late engineering design changes).

However, Tegethoff does not expressly disclose requesting whether a required

condition will be met by implementing a late engineering design change.

Tegethoff discloses a simulation tool that allows for continuous engineering of a

product from design through manufacturing and sale. It is well known in manufacturing

that required conditions exist, such as industry standards that must be met or specific

deadlines. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a question about required conditions associated with late engineering design changes in the questions of Tegethoff in order to more accurately assess whether or not to implement the product by considering a more comprehensive list of factors.

16.   As per claim 13, Tegethoff discloses a method wherein displaying a set of questions soliciting change driver-specific information comprises displaying a question requesting a retail value of the customers who would purchase the product despite the lack of implementing the engineering design change (See at least column 12, lines 5-35 and 44-67, wherein the simulation asks questions regarding market analysis and the retail value of the product in the current market).

However, Tegethoff does not expressly disclose requesting a percentage of customers who purchase the product despite the lack of implementing the engineering design change.

Tegethoff discloses receiving input regarding the current market and the current design of the product. It is well known in market analysis to consider percentages of customers when assessing the retail value of a product. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to include percentage associated with the market analysis of Tegethoff in order to make more accurate recommendations for a user by considering a more complex web of values when making the decision.

17.   As per claims 33, 35-38, 40-41, and 43 claims 33, 35-38, 40-41, and 43 are system implementations of the method of claims 5, 7-10, 12-13, and 2, respectively.

Therefore, claims 33, 35-38, 40-41, and 43 are rejected using the same art and rationale relied upon in the rejections of claims 5, 7-10, 12-13, and 2, respectively.

18.   As per claim 39, Tegethoff teaches a system wherein the graphical user interface is operable to receive change driver-specific information comprising information regarding a late engineering design change and wherein the analysis logic program generating a recommendation of not implementing the engineering design change in response to the indication (See at least the abstract, figure 4, column 6, lines 5-13 and 30-67, column 7, lines 10-25, column 8, lines 50-55, column 11, lines 30-50 and 55-67, column 12, lines 5-35, and column 15, lines 1-5, 15-30, and 60-67, wherein information is received concerning late engineering design changes and recommendations are made).

However, Tegethoff does not expressly disclose whether a required condition will be met by implementing a late engineering design change and generating a recommendation of not implementing the engineering design based on the required condition will not be met.

Tegethoff discloses a simulation tool that allows for continuous engineering of a product from design through manufacturing and sale. It is well known in manufacturing that required conditions exist, such as industry standards that must be met or specific deadlines. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a question about required conditions associated with late engineering design changes in the questions of Tegethoff in order to more accurately assess whether or not to implement the product by considering a more comprehensive list of factors.

19.   As per claim 42, Tegethoff discloses a system wherein the graphical user interface

is operable to receive change driver-specific information comprises receiving a

probability for addressing feasibility issues by changing assembly process instead of

implementing the engineering design change (See at least the abstract, figures 4 and 12,

column 5, lines 55-67, column 6, lines 5-13 and 30-67, column 7, lines 20-25, column 12,

lines 5-35, column 15, lines 1-5, 15-30, and 60-67, column 16, lines 45-65, and column

22, lines 25-30, wherein the change driver-specific information includes receiving

likelihood information about changing the assembly process).

However, Tegethoff does not disclose adding manpower and assembly time to the

assembly process.

Tegethoff discloses a simulation tool that determines if there are improvements in

the assembly process that can be implemented. Manpower and assembly time are well

known components of an assembly process. It would have been obvious to one of

ordinary skill in the art at the time of the invention to change the assembly process of

Tegethoff by adding manpower and assembly time in order to more efficiently aid

designers in improving manufacturability of a product by allowing the designers to

analyze tradeoffs in a cost effective manner. See column 5, lines 55-67, and column 6,

lines 1-15.

Allowable Subject Matter

20.   Claims 4, 6, 44, and 45 objected to as being dependent upon a rejected base claim,

but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

Conclusion

21.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Beth Van Doren whose telephone number is (703) 305-

3882. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz can be reached on (703) 305-9643. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

bvd

July 27, 2004

SUSANNA M. DIAZ
PRIMARY EXAMINER

A.U. 3623